

**ANNUAL ADMINISTRATIVE REPORT (FY2000-2001) AND
WORK PLAN (FY 2002) FOR INVENTORIES AND VITAL SIGNS
MONITORING**

FY2000-FY2002

EASTERN RIVERS AND MOUNTAINS NETWORK

New River Gorge National River (NERI)
Bluestone National Scenic River (BLUE)
Gauley River National Recreation Area (GARI)
Johnstown Flood National Memorial (JOFL)
Fort Necessity National Battlefield (FONE)
Friendship Hill National Historic Site (FRHI)
Upper Delaware Scenic and Recreational River (UPDE)
Delaware Water Gap National Recreation Area (DEWA)
Allegheny Portage Railroad National Historic Site (ALPO)

Eastern Rivers and Mountains Network Approval Signatures

John Karish Chief Scientist, PHSO	Date
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Elizabeth Johnson Inventory and Monitoring Coordinator, Northeast Region	Date
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I. Overview and Objectives

The Eastern Rivers and Mountains Network (ERM) includes nine national parks with significant natural resources. The parks range in size from approximately 66 to 30,000 hectares and are located across four states, PA, NY, NJ and WV. In FY00 and FY01, the ERM Network received funds from the Servicewide I&M program to begin to develop plans to inventory vertebrate and vascular plants in the network parks. With this funding, personnel were hired to compile and enter data from the Network parks into the three I&M program databases developed by WASO; NRBIB, NPSpecies and the Dataset Catalog. NPSpecies was developed to manage park species data, the Dataset Catalog was developed to maintain metadata on park spatial and nonspatial data sets, and the NRBib was developed to store natural resource bibliographic information for each park. Scoping workshops were held with subject matter experts, to identify data gaps, and inventory priorities for the network parks. Subject matter experts attending the workshops reviewed the network's existing inventory data, estimated its percent completion, and suggested priorities for future surveys. A four-year study plan was submitted October 1, 2001 outlining priority inventory work to be conducted in the network's parks. The Eastern Rivers and Mountains Network will not receive start up funding for monitoring until FY03.

Objectives for Biological Inventories

1. Compile and evaluate existing data for each park into NPS databases (all parks).
2. Evaluate existing inventory data and gaps and write 4-year study plan for vertebrate and vascular plant inventories (all parks).
3. Document 90% of the existing vertebrate and vascular plant species in the parks through targeted field investigations and determine the distribution and abundance of targeted groups of species identified by the Network parks.

II. Accomplishments (FY2001) and Scheduled Activities (FY2002)

A. Biological Inventories

Objective 1 – Compile and evaluate existing data for each park into NPS databases (all parks).

Task 1.1 – Compile and evaluate existing data on vertebrates and vascular plants and enter them in a consistent format into NPSpecies, NPBib, Database Template and the Dataset Catalog.

FY 2000-2001 Accomplishments:

- (1) Parks compiled existing inventory data and sent it to WASO for conversion and entry into NPSpecies.
- (2) A Research Associate (RA) hired through a cooperative agreement (CA) with Penn State University (PSU) handled data conversion and verification of the Network's NPSpecies database.
- (3) Research Associates hired through a cooperative agreement with PSU searched 108 museums and institutions for voucher specimens collected in the Network parks and entered this information into NPSpecies.

- (4) Fish voucher search- Cooperative agreement with Penn State University, Dr. Jay Stauffer. Project completion-2001. Collections are being searched for fish vouchers collected in the ERM Network parks. Species lists and distributions maps for each park are being created and data will be entered into NPSpecies.
- (5) Private consultant hired to review NPSpecies plant database for NERI, GARI and BLUE.
- (6) Student Conservation Association technician hired at DEWA to verify and enter backlogged references for the park into NPSpecies.
- (7) FDGC Metadata had been created for all ERM spatial data sets. Under a cooperative agreement with North Carolina State University (NC State) the following tasks have either been or are being finalized:
 - a) Metadata for spatial data sets has been sent to Kass Evans for processing in Blue Angel.
 - b) NC State developed procedures for converting metadata from FDGC standard format to the NPS Dataset Catalog format. The final conversion will be completed in Nov. 2001.

Activities and Products Scheduled FY 2002:

- (1) A full time term data manager will be hired for the ERM Network to begin managing and coordinating existing and newly acquired data for the Network.
- (2) PSU NPSpecies Research Associate-Project completion 2002. The continuation of record verification and entry into the NPSpecies database for the ERM Network. Identification of existing large data sets to be entered into relational databases.
- (3) Research Assistant hired through a cooperative agreement with Marshall University to create a relational database of existing vertebrate data collected by Dr. Thomas Pauley in three WV parks, NERI, BLUE, GARI.
- (4) Taxa experts identified to review DEWA NPSpecies database. Carolyn Mahan from Penn State Altoona-mammals, John Behler from Wildlife Conservation Society-herps, Bill Olson, private consulting botanist-plants, Jay Stauffer from Penn State University-fish, and Terry Masters from East Stroudsburg University-birds.
- (5) Vertebrate and vascular plant data mining and conversion to UPDE NPSpecies database.
- (6) NRBib update. Cooperative agreement PSU Research Associate Scott Tiffney. Project completion 2002. All Network parks will be visited and existing bibliographic information gathered and entered into the NRBib database.

Objective 2– Evaluate existing inventory data and gaps and write 4-year study plan for vertebrate and vascular plant inventories (all parks).

Task 2.1 – Scoping Workshops to identify inventory gaps and develop plans for inventory.

FY 2000-2001 Accomplishments:

- (1) July 25, 2000 scoping workshop held at NERI for three Network river parks, NERI, BLUE and GARI. Seventeen people attended including Regional I&M program staff, park resource managers, and scientists from outside agencies and

- Universities. The goal of the workshop was to identify gaps in vertebrate and vascular plant inventories and to develop a plan for inventories in the three parks.
- (2) October 24-25, 2000 a scoping workshop was held at DEWA for two PA river parks, DEWA and UPDE. Nineteen scientists from outside agencies and Universities attended the workshop along with park staff and regional I&M program staff. The goal of the workshop was to identify gaps in vertebrate and vascular plant inventories and to develop a plan for inventories for DEWA and UPDE.
 - (3) Meetings were held at PSU on Nov. 1999 and Jun 12, 2001 for four of the PA Eastern Rivers and Mountains Network parks. These four parks received funding to complete vertebrate and vascular plant inventories through both regional funding and pre-network I&M funding. Regional I&M Program staff and Cooperators met to discuss these inventories and review necessary guidelines for compliance with the National I&M program goals and objectives.

Task 2.2 – Write 4-year study plan for biological inventories.

FY 2001 Accomplishments:

- (1) ERM Network resource managers wrote park descriptions for the study plan including significant natural resources, park history, species of special concern, and management issues.
- (2) The Northeast Region I&M Coordinator and a Research Associate hired through a cooperative agreement with the University of Rhode Island compiled information gathered during the ERM Network scoping workshops and requested proposals from cooperators to fill priority inventory gaps identified during the workshops.
- (3) Eastern Rivers and Mountains Network study plan submitted to WASO, October 1, 2001.

Objective 3 – Document existing vertebrate and vascular plant species in the parks through targeted field investigations and determine the distribution and abundance of targeted groups of species identified by the Network parks.

Task 3.1 – Bat surveys

FY 2000-2001 Accomplishments:

- (1) A proposal was submitted to the Network by Dr. Steven Castleberry of the University of Georgia along with Dr. W. Mark Ford, USDA Forest Service, M. Alex Menzel, WV University and Jennifer Menzel, USDA Forest Service to conduct baseline surveys on existing bat community composition and relative abundance at NERI, BLUE and GARI. FY2002 funding was requested to begin this project.
- (2) A scope of work will be written for this project and request for proposals completed in 2002.

Task 3.3 –Bird Surveys

FY 2000-2001 Accomplishments:

- (1) A proposal was submitted by Terry L. Master, Ph.D. FY01 to conduct a grassland bird survey at DEWA. Fieldwork will begin in the summer of 2002

and a second season in 2003. Final report is due December 2003. FY2002 and FY2003 funding was requested for this project.

- (2) A proposal was submitted by Terry L. Master, Ph.D. to conduct a wetland bird survey at DEWA. The field work will begin in April 2003 and continue for a second season in the summer of 2004. Final report is due December 2004. FY2003 and FY2004 funding was requested for this project.

Task 3.5 – Fish surveys

FY 2000-2001 Accomplishments:

- (1) A scope of work and request for proposals is being prepared for this project (FY02). The work will entail sampling back-channel habitats of the Delaware River at UPDE and DEWA for fish, with a focus on two native species of special concern.
- (2) A cooperative agreement was established with Dr. Stuart Welsh from West Virginia University (FY01) to conduct a two-year fish inventory of the New River and its tributaries. A preliminary report is due by December 2001 and final analyses complete by December 2003 as part of graduate thesis.

B. Vital Signs Monitoring

Planning and implementation of vital signs monitoring has not begun. Network due to receive initial funding in FY03.

III. Staffing

Elizabeth Johnson, Northeast Region I&M Coordinator

Sara Stevens, Research Associate, URI

La Donna Francis Sifford, Research Associate, PSU

Scott Tiffney, Research Associate, PSU

ERM Network Cooperators for Biological Inventories

Penn State University- Dr. Richard Yahner

Penn State University-Dr. Jay Stauffer

California University of PA-Dr. Brian Paulson

North Carolina State University-Dr. Hugh Devine

Marshall University-Dr. Thomas Pauley

Wildlife Conservation Society-Dr. John Behler

Western PA Conservancy

West Virginia University-Dr. Stuart Welsh

Private consultant-Sam Norris

FY02 Potential cooperators-University of Georgia and East Stroudsburg University

ERM Network Cooperators for Biological Inventories

Association for Biological Inventory (ABI)

North Carolina State University

WVDNR-Jim Vanderhorst

PA Natural Diversity Inventory (PANDI)
Private contractor-GeoVantage
Private contractor-Kucera Intl.

IV. Public Interest Highlights

Amphibians and reptiles (herptiles) comprise a disproportionately high percentage of the park's T&E species, yet knowledge of their parkwide distribution and status prior to implementation of these inventories was limited. DEWA's herptile inventories have been targeted to address a specific park need and key goal of the Servicewide Inventory and Monitoring program-to assure that park managers have adequate scientific information to do their jobs.

- Inventory results are guiding planning for a new swim beach for the national recreation area. New data include parkwide distribution maps of several state-listed T&E species, including timber rattlesnake, long-tailed salamander and wood turtle. In 2001, these data guided internal project scoping (NEPA process) for the swim beach, directing the choices of potential development sites and helping identify viable alternatives.
- Status of the federally threatened bog turtle (*Clemmys muhlenbergii*) was documented and its parkwide distribution was mapped. In 2001, results guided Section 7 consultation (Endangered Species Act) in connection with a major park road rehabilitation project. Inventory contributes to achievement of a Servicewide (GPRA) Endangered Species initiative.
- Timber rattlesnake inventories have identified key habitat areas utilized by this T&E species. Results are guiding implementation of the park's Comprehensive Trails Plan. GIS analysis will identify areas where new visitor use patterns could impact this disturbance-sensitive species. In 2001, such analysis was used to evaluate potential hang-gliding sites, furthering the park's recreation mission while conserving resources.
- Vernal pond inventories have identified breeding habitat for spotted, Jefferson and marbled salamanders, 3 amphibians of special concern. In 2001, these wetland features received additional protection under New Jersey State land use regulations. Baseline maps developed from inventories will be essential for compliance with state permitting requirements. Park research which builds upon the inventory data was begun in 2001 and will identify strategies for long-term management of this resource.
- The inventories provided up-to-date "evidence" for over 90% of the park's amphibian and reptile species, a key Servicewide objective for all biotic inventories. One "new" species, mountain dusky salamander (*Desmognathus ochropheaus*), was discovered and represents a New Jersey first occurrence for this species.

V. Reports, Publications and Presentations

Inventory Plans

- Eastern River and Mountains Network pre-proposal for biological inventories
- Eastern River and Mountains Network inventory study plan for vertebrate and vascular plant species.

Reports

- Eastern Rivers/Mountains Network Summary of the West Virginia River Park's Scoping Workshop July 25, 2000
- Scoping Workshop Report Delaware Water Gap NRA and Upper Delaware SSR October 24th and 25th, 2000

Presentations

October 24, 2000. Eastern Rivers and Mountains Network Scoping Workshop. DEWA.
July 25, 2000. Eastern Rivers and Mountains Network Scoping Workshop. NERI.
Nov. 1999. Introduction to the Inventory and Monitoring Program. Penn State University.
June, 2001. The Inventory and Monitoring Program: Current Initiatives. Penn State University.

VI. Status of Park Vital Signs Monitoring

Planning and implementation of vital signs monitoring will not begin until funding becomes available to the Network in FY04.

VII. Budget Narrative

The Network requested \$112,000 in FY00 and \$30,000 in FY01 from the NPS Servicewide I&M program for biological inventories. In FY00-01, \$67,091 of this funding was used to hire two research associates at PSU to work on the Network's NPSpecies and NRBib databases and to hiring a research associate at URI to data mine, organize the scoping workshops and write the inventory study plan. Some of this funding also went to NC State for the conversion of ERM Network FDGC metadata conversion to the Dataset Catalog, to DEWA for NPSpecies development and clean up and to holding a scoping workshops and meetings in WV and PA. In FY00, a cooperative agreement with the Wildlife Conservation Society was amended for \$41,511 to conduct herpetological surveys and create a herp relational database for DEWA. In FY01, \$7,200 was allocated to hiring a botanist to verify and update the NPSpecies plant database for NERI, GARI and BLUE.

In FY2002, the Network has requested \$173,371 from the NPS Servicewide I&M Program to conduct biological inventories in the ERM Network parks. These funds will be used to initiate bat inventories at NERI, BLUE and GARI and grassland bird inventories at DEWA. It will also be used for developing a database for existing vertebrate data collected in the three WV parks.

Eastern Rivers and Mountains Network FY 2000 Income and Expenditures	NPS-WASO Inventory \$\$	Vital signs Monitoring \$\$	Waso Water Quality \$\$	Park Base & Other Park \$\$	Partners & Other Agencies	In Kind Services
Funding Sources						
Servicewide I&M Program (Network Funding)	112,000					
Servicewide I&M Program (Pre-Network Funding)	72,000					
Servicewide I&M Program-Regional Coordinator	21,250					
Total Income	205,250					
FY00 Expenditures						
Personnel (Salary and benefits)						
▪ Regional I&M Coordinator	21,250					
Contracts and Cooperative Agreements						
▪ Penn State University (Research Assoc.-NRBIB)	11,250					
▪ Penn State University (Research Assoc.-NPSpecies)	11,509					
▪ University of RI (Research Assoc.-Regional I&M)	10,690					
▪ North Carolina State University (Dataset Catalog)	2,000					
▪ Wildlife Conservation Society (DEWA-Herp Inventory)	30,452					
▪ California University of PA (FONE, FRHI-Herp inventory)	72,000					
▪ Regional Science project	17,040					
Operations and Equipment						
▪ DEWA-Vehicles and housing for Herp Inventory	11,059					
▪ Scoping Workshops	6,000					
▪ GPS Units (DEWA)	12,000					
Total Expenditures	205,250	0	0	0	0	0

Eastern Rivers and Mountains Network FY 2001 Income and Expenditures	NPS-WASO Inventory \$\$	Vital signs Monitoring \$\$	Waso Water Quality \$\$	Park Base & Other Park \$\$	Partners & Other Agencies	In Kind Services
Funding Sources						
Servicewide I&M Program (Network Funding)	30,000					
Servicewide I&M Program (Pre-Network Funding)	228,993					
Servicewide I&M Program-Regional Coordinator	21,250					
NER Regional Funds				95,623		
Fire Program				146,000		
Veg Mapping Program	231,770					
Line Item Construction				52,324		
Regional Science	17,040					
Total Income	529,053			293,947		
FY01Expenditures						
Personnel (Salary and benefits)						
▪ Regional I&M Coordinator	21,250					
▪ DEWA SCA Technician (NPSpecies)	2,286					
Contracts and Cooperative Agreements						
▪ Penn State University (Research Assoc.-NPSpecies)	10,000					
▪ North Carolina State University (Dataset Catalog)	2,000					
▪ Univ. of RI (Research Associate-I&M)	23,642					
▪ Sam Norris (NERI/GARI/BLUE NPSpecies plant review)	7,200					
▪ West Virginia University (NERI-Fish Inventory)				25,000		
▪ W. PA Conser. (FONE, FRHI, ALPO, JOFL-RTE Surveys)				17,400		
▪ USGS-BRD (UPDE- Dwarf Mussel Inventory)				24,000		
▪ Wildlife Conservation Society (DEWA Herp Inventory)				52,324		
▪ Penn State University (FONE, FRHI, ALPO, JOFL-Vertebrate Surveys)	158,661					
▪ California University of PA (FONE, FRHI-Herp inventory)	70,332					
▪ Kucera Intl. (DEWA-Veg Mapping Photography)	3,391			25,967		
▪ North Carolina State University (DEWA –photo mosaic)	10,097					
▪ ABI (DEWA-Vegetation Crosswalk)	12,479					
▪ PA Natural Diversity Inventory (DEWA-plots, fuels, veg map)	120,033			120,033		
▪ North Carolina State University (NERI –photo mosaic)	8,733					
▪ Geo Vantage (NERI-Photography)	16,775					
▪ Jim Vanderhorst (NERI-Plot data for Veg Mapping)	54,000			29,223		
Operations and Equipment						
▪ DEWA-Housing and Vehicles (WCS Herp Inventory)	5,980					
▪ NERI-Targets for veg mapping	6,262					
▪ Scoping Workshops	2,500					
Travel	6,568					
Total Expenditures	529,053	0	0	293,947	0	0

Eastern Rivers and Mountains Network Proposed FY02 Income and Expenditures	NPS-WASO Inventory \$\$	Vital signs Monitoring \$\$	Waso Water Quality \$\$	Park Base & Other Park \$\$	Partners & Other Agencies	In Kind Services
Funding Sources						
Servicewide I&M Program	173,371					
Servicewide I&M Program-Regional Coordinator	21,250					
Northeast Regional Science Funds				253,970		
Biological Resource Management Div.-WASO			50,000			
WRD-WASO			41,000			
USGS-WAQAM					85,000	
USGS-NRPP					66,000	
Total Income	194,621		91,000	253,970	154,000	
FY02 Expenditures						
Personnel (Salary and benefits)						
▪ Regional I&M Coordinator	21,250					
▪ UPDE-Hire personnel-data mining	10,000					
▪ Network data management	30,000					
Contracts and Cooperative Agreements						
▪ Marshall University (NERI/GARI/BLUE Database)	31,065					
▪ University of Georgia (NERI/GARI/BLUE Bat Survey)	73,613					
▪ East Stroudsburg University (DEWA-Grassland Birds)	25,553					
▪ NERI (Endangered Bat Management)				20,000		
▪ NERI (Polycyclic Aromatic Hydrocarbons in Gauley River)				42,470		
▪ DEWA (Restore Wood Turtle Habitat)				12,500		
▪ DEWA (Status and Habitat of Salamander Metapop)					66,000	
▪ DEWA (Assess Impoundment Values)				13,500		
▪ DEWA (Native Grassland Restoration/Exotics Control)				72,000		
▪ DEWA (Development of Groundwater Monitoring)			41,000			
▪ DEWA (Determine impacts on special protection waters)					85,000	
▪ UPDE (Identify Bald Eagle Habitat/Dev. Mgt Plan				93,500		
▪ UPDE (Pop Dynamics-Endangered Dwarf Wedge Mussel)			50,000			
Other						
Funds from in FY01 requested in FY02	3,140					
Total Expenditures	194,621	0	91,000	253,970	154,000	0